



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,649	03/25/2004	Norihito Takeuchi	5000-5155	6109
27123	7590	01/12/2006		
MORGAN & FINNEGAN, L.L.P. 3 WORLD FINANCIAL CENTER NEW YORK, NY 10281-2101			EXAMINER MAY, ROBERT J	
			ART UNIT 2875	PAPER NUMBER

DATE MAILED: 01/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/808,649	TAKEUCHI ET AL.	
	Examiner	Art Unit	
	Robert May	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-5 and 11-13 is/are rejected.
- 7) ☒ Claim(s) 3 and 6-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>3/25/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claim 3 is objected to because the it is unclear to the examiner if the shortest distance is drawn from the perimeter of the first recess to either the center or perimeter of the second recess. The office construes this "distance" to be drawn between the perimeters of the first and second recesses. Appropriate correction is required.

Claim 5 recites that the depth of the recess is at most 1.5 folds the diameter of the perimeter. The examiner construes the term "folds" to be a multiplicative function and the applicant should rephrase this limitation as --1.5 times the diameter of recess perimeter--.

Claim 10 recites the limitation " the display surface" in Line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 6 is objected to as the claim is interpreted to mean that the light emitting element is disposed on the side of the transparent substrate opposite to the light emitting side. It is suggested to reword this claim to avoid ambiguity and/or confusion and especially remove or significantly change the phrase "with respect to the light incidence surface of the transparent substrate."

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakahashi (US Pat 6,767,105).

Regarding Claim 1, Nakahashi discloses in Figure 1, a light guide plate 12 having a light entry face 12a and a light emitting face 12b of a being made of an translucent acrylic resin material (Col 3, Lines 60-61) having hemispherical depressions 22 on the emitting face each having an internal surface forming each of the hemispherical surfaces (Col 2, Lines 62-63) which bulge towards the light entry face 12a.

Regarding Claim 4, Nakahashi discloses the hemispherical projections or depressions as being arranged in a cubical close packed configuration in Figure 1, and can be arranged in hexagonal close packed configuration as shown in Figure 13 as the blasting pressure is adjusted for fabricating the light guide plate 12 (Col 8, Lines 55-62).

Claims 11-13 is rejected under 35 U.S.C. 102(b) as being anticipated by Kawasaki (JP 05139098 A). Imazato discloses a method for sandblasting a surface of a transparent plate by using a mask to form concave portions in predetermined areas on the surface of the plate for decorative purposes.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 2 & 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakahashi.

Regarding Claim 2, Nakahashi discloses all of the claimed elements of Claim 1 as described above in the rejection under 102(b), however Nakahashi fails to disclose the shortest distance between a recess and its nearest adjacent recess is at least 50 microns and the distance between the centers of areas defined by recess perimeters on the light exit surface is at most 200 microns. In cases like the present, where patentability is said to be based upon particular chosen dimensions or upon another variable recited within the claims, applicant must show that the chosen dimensions are critical. As such, the claimed dimensions appear to be an obvious matter of

Art Unit: 2875

engineering design choice and thus, while being a difference, does not serve in any way to patentably distinguish the claimed invention from the applied prior art. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990); *In re Kuhle*, 526 F2d. 553, 555, 188 USPQ 7, 9 (CCPA 1975). Therefore, it would be obvious as a matter of engineering design choice to have the recesses of Nakahashi having a distance of at least 50 microns between a recess and its nearest adjacent recess and the distance between the centers of areas defined by the recess perimeters is at most 300 microns.

Regarding Claim 5, Nakahashi discloses all of the claimed elements of Claim 1 as described above in the rejection under 102(b), however Nakahashi fails to disclose each recess having a depth which is at most a half the thickness of the transparent substrate and is at most 1.5 folds the diameter of the perimeter on the light exit surface. In cases like the present, where patentability is said to be based upon particular chosen dimensions or upon another variable recited within the claims, applicant must show that the chosen dimensions are critical. As such, the claimed dimensions appear to be an obvious matter of engineering design choice and thus, while being a difference, does not serve in any way to patentably distinguish the claimed invention from the applied prior art. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990); *In re Kuhle*, 526 F2d. 553, 555, 188 USPQ 7, 9 (CCPA 1975). Therefore, it would be obvious as a matter of engineering design choice to have the recesses each

Art Unit: 2875

having a depth which is at most a half the thickness of the transparent substrate and is at most 1.5 folds the diameter of the perimeter on the light exit surface.

Allowable Subject Matter

Claims 3, & 6-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding Claim 3, the prior art does not teach or suggest a transparent substrate as recited in Claim 1 wherein the sum of a diameter as defined by the perimeter and the shortest distance between perimeter of a first recess and the perimeter of nearest recess is at least the length of minor axis of the oval sphere and is at most the length of major axis of the oval sphere.

Regarding Claims 6-10, the prior art does not teach or suggest a light emitting device as recited in Claim 1 where there is a light emitting element disposed on the side opposite the light emitting face of the transparent substrate.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Parker (2001/0053075), Sugi (JP05045652A), Chen (6,719,930) Oguchi (4,648,691) & Egawa (6,295,104) all disclose a light scattering panel for an LCD with textured protrusions and recesses.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert May whose telephone number is (571) 272-5919. The examiner can normally be reached between 9 am– 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax number for the organization where this application or proceeding is assigned is (571) 273-8300 for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval PAIR system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RM

12/29/2005



JOHN ANTHONY WARD
PRIMARY EXAMINER